

ABSTRACT OF THE DISCLOSURE

[0093] A digital receiver, that may be used to receive VSB/QAM digital television signals, includes an adaptive fine carrier recovery circuit that compensates for deviations in the carrier frequency or phase. The carrier recovery circuit de-rotates a signal including phase errors. Estimations of phase errors are filtered using a filter whose gain and bandwidth are adjusted adaptively. This allows the carrier recovery circuit to track phase/ frequency offset without introducing significant jitter. In one embodiment, the receiver includes a DFE, and the adaptive carrier recovery circuit mitigates instability that might be associated with the DFE.